

WHAT IS CLAIMED IS:

Claim 1. (Amended) In a turret mooring arrangement in which a turret (16) is disposed in a moonpool tube (13) of a vessel (1) and the turret is rotationally supported on said vessel by an axial bearing, (15) a radial sliding bearing arrangement comprising,

a cylindrical bearing surface ring (4) disposed about an exterior portion of said turret (16), said ring characterized by an outer surface with an outer diameter,

a plurality of radial bearing assemblies (14), with each assembly secured in a ring inwardly of said moonpool tube (13), with each radial bearing assembly (14) having a pad (5) with a surface which faces radially inwardly, the inward facing surfaces of said pads (5) collectively defining a segmented substantially cylindrically shaped surface having an inner diameter,

said inner diameter of said pads of said radial bearing assemblies being greater than said outer diameter of said bearing surface ring such that when said turret (16) is substantially axially aligned with said moonpool tube (13), a radial gap (7) of predetermined clearance exists between each inward facing low friction material surface of said pads (5) and said bearing surface ring (4) such that only during severe sea conditions does contact and heaving sliding action take place between said pads (5) and said bearing surface ring (4).

Claim 2. (Original) The arrangement of claim 1 wherein,

said outer surface (19) of said cylindrical surface ring (4) is corrosion resistant.

Claim 3. (Original) The radial bearing arrangement of claim 1 wherein,

each of said plurality of radial bearing assemblies (14) is mounted on a bearing support ring (11) which is secured inwardly of said moonpool tube (13).

Claim 4. (Original) The radial bearing arrangement of claim 1 wherein,

said surface of said pads (5) of each radial bearing assembly (14) is of a low friction material.

Claim 5. (Original) The radial bearing arrangement of claim 3 wherein,

each radial bearing assembly (14) includes a bearing bracket (9) with a releasable attachment device (10) which releasably attaches said bracket (9) to said bearing surface ring (11), and

said pad (5) is constructed of a low friction material and is secured to said bracket (9),

whereby said bracket (9) and said pad (5) can be removed and said pad 5 can be replaced while said vessel (1) remains moored at an offshore location,

wherein said radial gap (7) and said releasable attachment device (10) enables removing of a selected pad (5) and replacing same while said vessel remains moored at an offshore location.

Claim 6. (Amended) ~~A radial bearing arrangement for rotatably supporting a turret with respect to a vessel, comprising,~~ In a turret mooring arrangement which has a turret extending through a moonpool shaft (13) of a vessel, said moonpool shaft having an upper end which opens to a top side of said vessel (1) and a lower end which opens at a bottom side of said vessel, said turret having a turret upper end (16) and a turret lower end (2), a rotational support arrangement for rotatably supporting said turret with said vessel (1) comprising,

a single axial bearing arrangement mounted between a horizontal surface of said upper end (16) of said turret and a horizontal surface of said vessel, and

a single radial bearing arrangement mounted between said turret lower end (2) and said moonpool shaft (13) lower end, said single radial bearing arrangement including,

a ring disposed around a surface of the said turret lower end (2),

a plurality of radial bearing assemblies (14) mounted on each vessel said lower end of said moonpool shaft with each assembly including a low friction pad (5) surface which is radially spaced from said ring (4) by a predetermined clearance, such that only during severe

sea conditions does contact and heavy sliding action take place between said pads (5) and said bearing surface ring (4).

Claim 7. (Original) The arrangement of claim 6 wherein,

said low friction pads (5) are characterized by a radial thickness in the range of from about 25 to about 50 millimeters.

Claim 8. (Original) In a radial bearing arrangement for rotatably supporting a turret with respect to a vessel, the arrangement including a ring (4) disposed around a surface of the turret and a plurality of radial bearing assemblies (14), each assembly including a bracket (9) which is removably secured to the vessel, with a low friction pad (5) removably secured to each corresponding bracket, with each pad having an inner surface that is juxtaposed but radially spaced from said ring, a method for replacing said pad while said vessel is moored by anchor legs from the sea floor to the turret comprising the steps of,

removing said bracket (9) and said pad (5) from securement to said vessel,

moving said bracket (9) and said pad (5) vertically away from said ring so that said pad is not juxtaposed with said ring,

then replacing said pad (5) on said bracket, and

then securing said bracket (9) with replaced pad to said vessel with said replaced pad radially spaced from and juxtaposed with said ring.